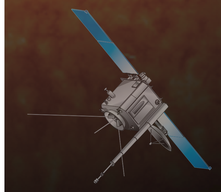
SH21B-0413

STEREO in the Virtual Solar Observatory Context

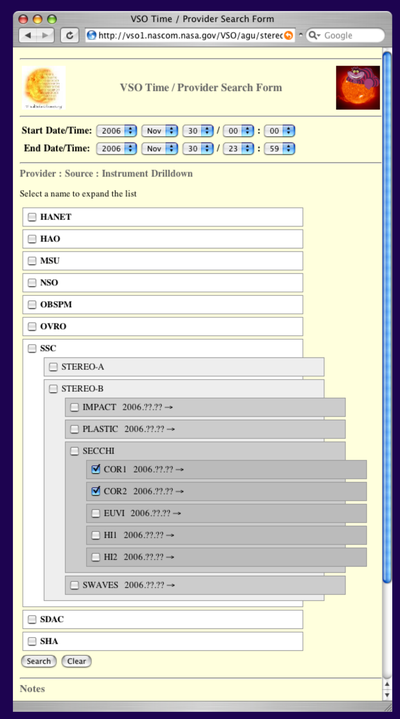
S S C



The Virtual Solar Observatory (VSO) was to handle heterogeneous data sets from multiple observatories. With its two spacecraft and multiple instruments, the STEREO mission provides an excellent example of solar and heliospheric physics research based on multiple data sets, and a good test of the abilities of VSO. Here we will discuss how the VSO will meet the key challenges that STEREO presents. In particular, the wide range of data classes and non-stationary viewpoints of the two spacecraft demand a flexible underlying data model of the VSO.

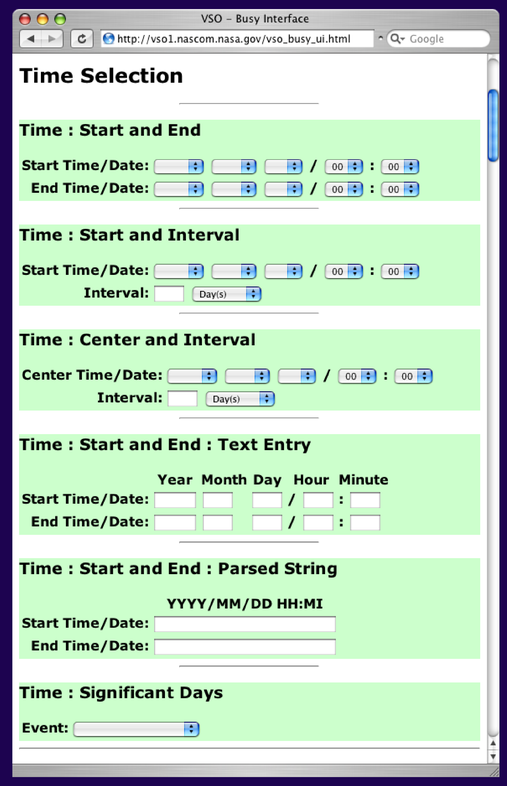
Search Flexibility

The architecture of the VSO allows there to be any number of interfaces to search data stored by the individual data providers. Some scientists may prefer searching for only STEREO data, while others may wish to search for STEREO data along with instruments from other sources:



Parameter Flexibility

Since researchers may wish to refer to parameters in different ways, it is possible to build interfaces to suit specific users, or groups of users. Through a series of translation interfaces, we can provide the ability to specify time, or any other parameter, in a wide variety of ways:



Applicaton Programming Interface

By using the VSO API, programmers can write their own custom interfaces, or add STEREO searching to their existing search utilities. Although VSO API uses Web Services, it does not require the front end to be web-based, and may be a desktop application, web-based service, a command line program, or accessed through functions in other computer languages such as IDL. Common tasks can be automated to free up researchers to focus on science, instead of trying to find and download new data.

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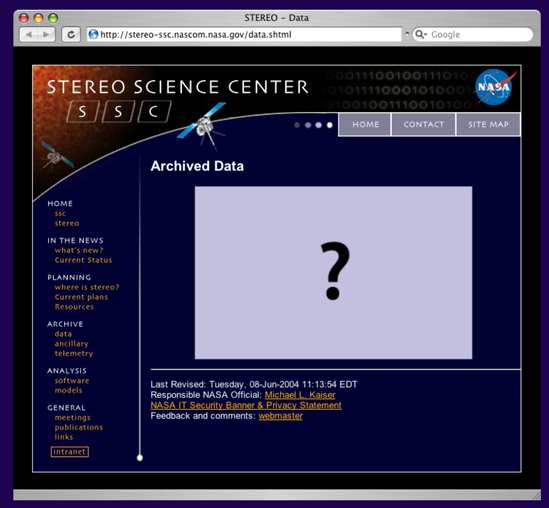
We want your input!

If you'd prefer to search for data in some way that we don't currently have available, or would prefer to search through one of the other VxOs, there is still a year to make changes before STEREO launches. Please let us know how you would like to acquire data, so that we can attempt to better serve the solar community.



http://stereo.gsfc.nasa.gov/

http://virtualsolar.org/